Biodiesel:

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What is Biodiesel ?

Biodiesel can be made from many sources, but it is basically produced by separating glycerin from vegetable oil, including used cooking oil or fresh oil from plants such as soybeans. When the glycerin is separated it produces methyl esters. The methyl esters are the "biodiesel," and are also used in cleaning products, lubricants, cosmetics, and pharmaceutical products.

When Rudolph Diesel demonstrated his engine in 1900, he used peanut oil as a fuel. The biodiesel in use at GRC is made from soybeans – organic and renewable. As you replace diesel with biodiesel, emissions are reduced 10-20% for carbon monoxide, hydrocarbons, and particulate matter. Biodiesel is also biodegradable, nontoxic, and virtually free of sulfur and aromatics.

Photo by Christie Myers 2003.

Dan White, Outreach Coordinator, fueling the Aero-bus with soy biodiesel on a cold March morning.

GRC study:

A 9-month pilot program at GRC studied one vehicle using various diesel to biodiesel percentages. All facility users felt comfortable with a 20% biodiesel to 80% low-sulfur diesel mix (called "B20"), although test vehicles have been run at 100% biodiesel with no problem. One of the biggest concerns was using B20 in Northeast Ohio winter weather. By the end of January, GRC had experienced the winter's coldest weather conditions with no cold weather related problems such as fuel line freeze up.

GRC had its first 7,500-gallon delivery on January 28, 2003. From that point on, GRC expanded the B20 use to all diesel vehicles, stationary diesel fuel storage tanks, and all equipment using these tanks (such as electrical generators). During 2003, GRC received 28,000 gallons of B20 biodiesel.

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